

Waste Reduction and Recycling in Indiana

An Activities Report

**Indiana Department of Administration
Indiana Department of Commerce
Indiana Department of Environmental Management**

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Indiana Department of Administration
Indiana Department of Commerce
Indiana Department of Environmental Management

Executive Summary

Indiana state and local governments have worked diligently over the past ten years to meet Indiana's waste reduction goals as specified in House Enrolled Act 1240 (Public Law 10-1990) that became law on July 1, 1990. Indiana joined the U.S. Environmental Protection Agency (U.S. EPA) and many other states in encouraging waste reduction, including source reduction, reuse and recycling, at a time when little of this activity was going on. Indiana set an aggressive goal of 35% waste reduction by 1996 and 50% waste reduction by 2001 and established programs at the state and local level to assist in accomplishing this task.

HEA 1240 called for the formation of local solid waste management districts to plan and implement waste reduction and recycling programming on the local level. Today, there are 62 solid waste management districts working in Indiana's 92 counties. Responsibilities were also given to the Departments of Environmental Management, Commerce and Administration. These dynamic programs work effectively together, breaking down barriers to waste reduction and moving recycling to a higher level in Indiana. In addition, Indiana's economy benefits from a strong recycling industry, making new products out of scrap metal, paper, glass, plastic and other materials.

Recycling requires collection, remanufacturing and purchase of the new product. The three Departments of State government have been working effectively as a team over the past ten years to assist in each of these areas. The Indiana Department of Environmental Management (IDEM) leads efforts to assist local recycling collection programs through equipment purchases and education. The Indiana Department of Commerce (IDOC) Recycling Market Development Program leads the effort in building markets for recyclables by assisting businesses in: using recyclables to make products or industrial feedstocks; implementing waste reduction; using recycled-content products; and finding markets for recyclable materials. The Indiana Department of Administration (IDOA) works on internal state government programs, including reuse efforts, recycling collection, and procurement of recycled-content products. The synergy of the three agencies has impacted the recycling sector of Indiana's economy.

Indiana has come a long way since 1990 in reducing waste. In the most recent calculation by IDEM (data through December 31, 2000), it is estimated that Indiana has reached a waste diversion level of 35%. Although we have not met our specified goal, Indiana's experience of successful waste reduction is comparable to many other states. No states claim to have reached 50% waste reduction. Indiana is well on its way to meeting the U.S. EPA's national goal of recycling 35% by 2005.

Measuring our success and understanding how we compare to other states has been complicated by the fact that there was no measurement infrastructure in place in 1990. In addition, states set differing types of goals and included different materials in the mix. Some state programs include only recycling, some include waste reduction, others count only residential materials while others add construction and demolition material, automobiles or commercial recycling. Indiana is now joining other states to use the recently approved U.S. EPA standard measurement program to look at our 'recycling rate.'

Indiana's waste reduction programs, conceived in 1990 and dynamically implemented throughout the decade, are having an ever-expanding impact on Indiana's residents, businesses and governments. Recycling has become a way of living for many people and communities, and a way of doing business in many companies. Recycling and reuse adds jobs to the Indiana economy, employing approximately 75,000 people, with annual revenues of \$19 billion (Recycling Economic Information Study, 2001) Waste reduction and recycling reduces our reliance on virgin raw materials, responsibly keeping materials in commerce. This saves energy by reducing our need to acquire raw resources such as timber, metal ore and petroleum. Many of these acquisition activities are very energy intensive. More important to many Indiana industries, manufacturing processes that use recycled feedstocks often have much lower rates of energy consumption than those using only virgin materials.

The importance of the 3R's - reduce, reuse, recycle - will continue to grow. Indiana's progressive efforts to build a strong infrastructure to encourage and support waste reduction and recycling in the residential, business, and government sectors will continue to bear fruit and make Indiana a leader in this arena.

History

In 1990, the Indiana State Legislature passed a bill to provide a broad foundation of local and state efforts intended to decrease the amount of material going to Indiana landfills. The goal of this legislation was to encourage responsible use of materials in order to protect the environment for future generations. The new policy stated that "source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods."

The legislation established goals for the state "to reduce the amount of solid waste incinerated and disposed of in landfills in Indiana by:

- 1 - thirty-five percent (35%) before January 1, 1996; and
- 2 - fifty percent (50%) before January 1, 2001." (IC 13-19-1)

HEA 1240 and later legislation established programs at the state level in the Indiana Departments of Environmental Management (IDEM), Commerce (IDOC) and Administration (IDOA) to encourage waste diversion. In addition, a new local government infrastructure was established in the Solid Waste Management Districts to assist waste reduction and recycling at the county (or multi-county) level. A detailed listing of Indiana Code references is in Attachment A.

Developing the Goal

In 1990, HEA 1240 set the Indiana waste diversion goals at a time when the federal government and many other states were also setting goals for recycling and waste reduction. In 1989, U.S. EPA set a national recycling goal of 25% by 1995. Indiana joined about fourteen other states in setting the most aggressive goal of increasing recycling or waste reduction to 50% by 2001. In 1995, U.S. EPA measurement showed the national recycling rate to be 27%. A new U.S. EPA goal was set and is now in place for recycling 35% by 2005. No specific consequences were defined in Indiana for not meeting the State goals. State goals set the priorities for action and do provide strong incentives for partners to work together to move recycling and waste reduction faster. The goals are a driving force in Indiana solid waste management policy.

State goals set in the late 1980's and early 1990's were not consistent in their available measurement systems. Some states chose to follow the example of U.S. EPA's goal, others did not. The U.S. EPA did not provide a standard measurement for recycling or have a recommendation on how a goal should be defined or measured, until recently. The interest in recycling developed quickly in the late 1980's, in part spurred by the story of the homeless New York City garbage barge. U.S. EPA did not have time to develop a consistent methodology for goals or measurement. U.S. EPA itself was in the process of determining a methodology to measure progress toward the national goal.

As a result, some states included only recycling, others set the goal to measure waste diversion, including material that was recycled and material that was reduced or reused and never became a scrap or waste. States were not consistent in what waste streams were included in the definition. Some included only residential materials while others added construction and demolition material, recycling of automobiles, and /or commercial recycling activity.

Indiana's choice to encourage waste diversion shows a commitment to a progressive path, and was intended to encourage source reduction, reuse and recycling. This reflects Indiana's hierarchy of waste management. Source reduction, reuse and recycling are preferred over incineration and landfill disposal.

State and Local Programs to Meet the Goal

HEA 1240 required the State to develop a statewide solid waste management plan. This plan followed the U.S. EPA's waste management hierarchy, giving preference to source reduction, reuse, composting and recycling, with final disposal of materials as a last resort. By statute, final disposal includes landfilling, incineration, and waste-to-energy waste disposal.

HEA 1240 called for the formation of local solid waste management districts to plan and implement waste reduction and recycling programs on the local level. Today, there are 62 solid waste management districts working in Indiana's 92 counties. These organizations have taken on various responsibilities depending upon the local situation. Many have been instrumental in encouraging residential recycling collection programs, educating adults and children, and breaking down the local barriers to recycling and buying recycled in many arenas. A summary of each district's structure, budget, and activities are noted in the booklet entitled *District Profiles*, published with grant funds from IDEM's Recycling Grants program. A copy of the 140 page *District Profiles* is available upon request.

The Indiana State Legislature understood that recycling requires collection, remanufacturing and purchase of the new product. Recyclable materials must complete the loop to truly be recycled. Programs were established in HEA 1240 and in later legislation that defined activities for three Departments of State government to address each of these areas. These programs have been working effectively as a team over the past ten years. The synergy of the three agencies has impacted the recycling sector of Indiana's economy and reduced waste disposed.

- The **Indiana Department of Environmental Management (IDEM)** Source Reduction and Recycling Grants program (IC 13-22-2) and the Household Hazardous Waste Grants Program (IC 13-20-20) were created in 1989 within the Office of Pollution Prevention and Technical Assistance (OPPTA). OPPTA works closely with the solid waste management districts, counties, schools, non-profits, cities and towns to assist local recycling collection programs through the funding of startup costs, equipment purchases and education.

- The **Indiana Department of Commerce (IDOC)** Recycling Market Development Program (IC 4-3-3) was formed to develop and promote markets for recyclables, assisting Indiana businesses and industries create or use recycled-content products through technical and financial assistance. Financial programs are intended to "promote and assist recycling throughout Indiana by focusing economic development efforts on businesses and projects involving recycling." These programs are under the direction of the Recycling Energy Development Board (IC 4-23-5.5). In addition, The Indiana Department of Commerce Recycling Market Development Program leads the effort in building markets

for recyclables by assisting businesses in using recyclables to make products or industrial feedstocks, implementing waste reduction, using recycled content products, and promoting markets for recyclable materials.

•The **Indiana Department of Administration** (IDOA) works to make Indiana government a leader in reduction, reuse, recycling collection, and procurement of recycled-content products. The Department of Administration manages the in-house recycling program for State government facilities located in Marion County. IDOA has also developed and implemented a recycled-content procurement policy (IC 4-13-1.4). As a result of Executive Order 99-07 signed by Governor O'Bannon, a comprehensive Greening of the Government Program is now in place to improve the overall environmental performance of Indiana government operations, in many cases, making those operations more efficient and cost effective.

•The **Indiana Department of Transportation** (INDOT) has also worked to increase use of recyclables in transportation projects. Recyclable materials that are in various stages of testing and reuse include asphalt, concrete, coal-combustion by-products, foundry sand, tires, glass, and other materials.

Since the enactment of HEA1240, many activities have been put into place to pursue the State goals. A broad spectrum of activities and programs have been designed and implemented to meet the needs of general public, local governments, businesses and the State agencies. These efforts have included the development and distribution of educational and promotional materials, physical infrastructure-building, purchase of equipment to make recycled-content products, purchase of recycled-content products, marketing assistance, technical assistance, and more.

State financial and technical assistance has included the following:

- Promoting source reduction and reuse;
- Assisting the development of the infrastructure for curbside and drop-off recycling collection and processing programs which are targeted for local communities;
- Assisting organic material composting programs in collection of leaves, yard debris and other organic waste;
- Assisting Indiana businesses to increase and further develop capacity to process recyclables for use as an industrial feedstock and to manufacture recycled-content products;
- Providing technical assistance to Indiana businesses to develop and promote end-markets for scrap materials;
- Promoting purchase of recycle-content products, especially those manufactured or distributed in Indiana;
- Maintaining and distributing information about markets for Indiana's recyclables; and
- Actively promoting and purchasing new recycled-content products.

Measuring Waste Diversion in Indiana

Measuring the amount of material reduced or recycled is a challenge for Indiana and for all states. Through the guidance of the Indiana's Solid Waste Policy Advisory Council (SWPAC), a legislative committee which sunset in 1998 (IC13-21-2-9), IDEM developed a solid waste diversion measurement. IDEM determines the diversion measurement from a calculated generation rate that is adjusted each year by an economic growth factor and displayed as a per capita statistic. From there, IDEM subtracts the annual disposal tonnage resulting in an annual diversion in tons. The overall tonnage is converted to a percentage of the total waste generated in that given year. For the calendar year 2000, the diversion rate is calculated at 35%. Details of this calculation are noted in Attachment B.

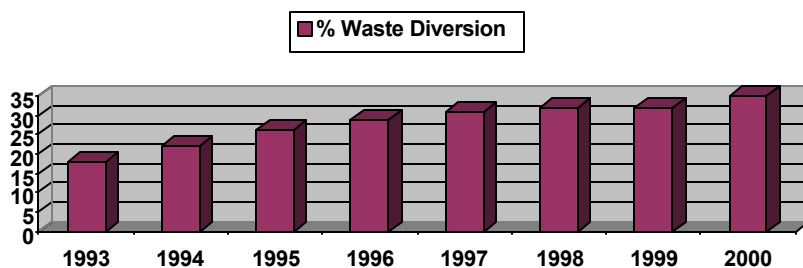
Because of the inconsistency in which states have measured diversion, there is a national effort by the U.S. EPA and the National Recycling Coalition to create one simple recycling measurement system. This new measurement would not replace Indiana's current waste reduction measurement, but rather supplement that statistic with a true recycling rate measurement that can be compared to other state recycling rates. The U.S. EPA published the recycling measurement system in 1998, and at least 20 states including Indiana are adopting this new national standard for measuring recycling.

Results of Measurement

To reflect the comprehensive efforts at waste diversion, Indiana's legislature chose a state goal that includes recycling *and* waste reduction, while other states have measured just recycling alone. This calculated "diversion rate" measures the full impact of waste reduction on final disposal, including source reduction, pollution prevention, composting, and recycling. Over the last decade, the amount of waste per capita diverted from final disposal has also increased significantly.

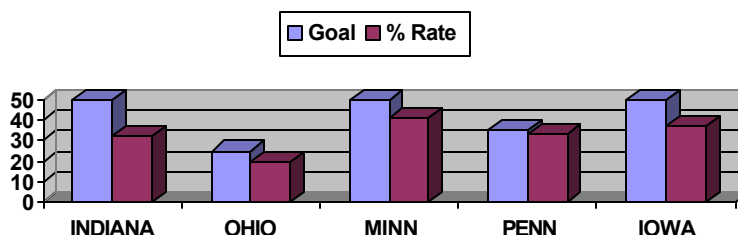
As of December 31, 2000, Indiana had reached 35% waste diversion. Although Indiana has not reached the goal set back in 1990, we have made great strides in reducing waste, reusing materials, composting and recycling, all of which are activities to keep materials out of disposal facilities. In addition, we have worked to decrease the hazardous characteristics of our waste stream and encouraged proper management of materials. Our commitment is strong to continue and to expand our efforts.

Percentage of Municipal Solid Waste Diverted



Indiana has come a long way and in a comparison of like conditions, is now on an average par with what other states have achieved. At the national level, Indiana is well on its way toward meeting the U.S. EPA's goal of recycling 35% by 2005.

Midwestern "Diversion Goals and Recovery Rates"



(Source: *BioCycle, Journal of Composting & Organics Recycling*, Nov. 2000)

One national study, reported in the November 2000 issue of *BioCycle Journal of Composting and Organics Recycling*, a national trade magazine, finds the national average to be 32% (Attachment C) Caution is applied in utilizing this number, because each state measures recycling and waste reduction with different measurement systems.

Indiana Department of Environmental Management Collection Programs, Public Education and Technical Assistance



Indiana communities are providing access to recycling for nearly all our residents, with cooperative efforts from the Indiana Department of Environmental Management (IDEM), solid waste management districts, private sector recyclers and local units of government. Over 95% of Indiana residents have recycling services available through a recycling curbside or drop-off program within eight miles of their homes. IDEM has developed a web-based searchable database of 169 curbside and 650+ drop-off locations, household hazardous waste drop locations and yard waste composting locations. Any resident of Indiana can search their county for solid waste diversion opportunities near their home or workplace. This Web site database provides fingertip access to information available throughout Indiana. This searchable database can be found at: www.IN.gov/idem/oppta/recycling/search

IDEM's Source Reduction and Recycling Grants and the Household Hazardous Waste Grants Programs have assisted in funding over 1,048 grants since 1990. These grants have provided a total of \$22,117,488 for the purpose of educating citizens, expanding composting, household hazardous waste and recycling collection infrastructure, and promoting to citizens the benefits and importance of buying recycled products. See Attachment D for grant funding summary.

As noted in the state statutes, one of the primary forms of financial assistance provided by IDEM is through education and promotion funding. IDEM has invested \$6,701,588 in public education grants, representing 30% of grant funding since 1990 toward local and statewide education programs, focused on waste reduction and recycling. Seven school environmental curriculums are now distributed through school systems around the state, and several TV video commercials have aired to capture the attention of the general public.

In support of local startup costs, IDEM has also invested in local infrastructure development, including equipment purchases such as trucks, collection bins, balers, glass crushers and paper shredders. Because yard waste constitutes 10% of the waste stream by weight, IDEM has worked closely with local communities to build leaf collection and yard waste collection programs. To encourage yard waste collection, IDEM has invested \$5,306,782 in composting grants since 1990 to fund leaf collectors, wood shredders, loaders, and tub grinders. In each grant awarded, the local community has matched the state funds with local funding and committed to the on-going program expenses to sustain the collection program.

Recycling grant funding of \$7,336,385 since 1990 has assisted local communities in building their recycling collection infrastructure through the purchase of vehicles and equipment. Many projects have been dedicated to public education of citizens about the importance of waste reduction, recycling and stopping illegal dumping. Education is one way to encourage individual participation. Some well-advertised, highly visible curbside collection programs such as those in the City of Hammond, the City of Seymour, and St. Joseph County can boast of public participation rates of 75% or more.

Other communities, however, have a lower than expected participation rate. Some identified barriers to successful collection efforts include poorly advertised and maintained drop-off recycling collection programs, and curbside collection programs that are difficult to utilize or lack any economic incentives to reduce waste. Often a mandatory participation ordinance will reduce public support rather than increase participation. The state government recognizes the nature of local home rule in the design of a recycling program, and encourages voluntary persuasion to boost public participation. There is still much work to be done to better educate residents of the local services provided and, in many situations, to enhance the services to better fit the needs of the residents.

One positive way to reach the public is through recognition programs. The Governor's Awards for Excellence in Recycling are awarded annually and recognize the excellent programs around the state. Approximately twenty programs are selected each year for this honor, from about one hundred nominations. An awards ceremony is held each May at the annual Indiana Recycling Coalition

conference. Past award winners are featured on the following Web site:
www.IN.gov/idem/oppta/recycling.

Household hazardous waste collection programs have been established throughout the state, with \$689,433 in state recycling funds and an additional \$2,083,301 from the Hazardous Waste Substance Trust Fund. Through aggressively seeking household hazardous wastes from collection programs throughout the state, disposal facilities receive less toxic waste streams. Used motor oil and household mercury batteries are collected in at least sixty of Indiana's 92 counties, and paint, pesticides, automotive fluids, and herbicides are collected in at least half of the state. Most of the collected material is reused or recycled, with the most toxic materials properly disposed of with fiscal support from IDEM and the local communities.

IDEM is addressing local program-specific issues through technical assistance with regional representatives. Technical assistance is offered to redesign collection methods to meet market needs and offer suggestions on various media and educational programming that can reach out to the public and encourage more participation in seven designated regions of Indiana.

Indiana Department of Commerce

Business Assistance to Reduce Waste and Build Markets for Recyclables



Introduction

The Indiana Department of Commerce Recycling Market Development Program is challenging Indiana business to reduce waste, increase recycling and manufacture and use recycled-content products and industrial feedstocks. Businesses, the commercial sector and industry, must do their part to reach the 50% waste reduction goal.

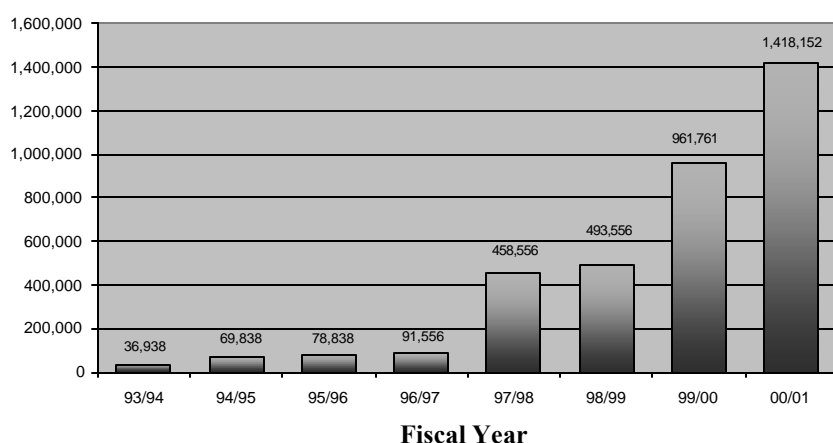
Building a successful recycling infrastructure requires collection of recyclables, processing and remanufacturing of these materials into new products and finally, purchase of these recycled content products. Commerce is working with the business community to build Indiana's infrastructure for processing and remanufacturing recyclables into usable feedstocks and products. Additionally, Commerce is encouraging businesses to reduce waste through source reduction, reuse, recycling and use of recyclables. Commerce's Recycling Market Development Program accomplishes this through loans and grants and technical assistance to Indiana businesses.

Indiana's recycling infrastructure has expanded significantly in the past decade. There are over twice as many processors, brokers and manufacturers for recyclables than there were in the early 1990's. The Reuse and Recycling Industry in Indiana includes 1,700 establishments (Recycling Economic Information Study, 2001). More companies in the state are making recycling and waste reduction a normal part of doing business. Companies are processing recyclables, using recycled-content feedstocks in the manufacturing process and seeking markets for their recyclables.

Expanded Loans to Assist Companies in Reducing Waste and Using Recyclables

The cornerstone of the Commerce financial assistance program is the Recycling Promotion and Assistance Fund (RPAF). This economic development tool provides zero-percent interest loan financing to assist companies in preparing material for use as a feedstock or making recycled content products. The 35 active projects directly impact the waste stream by using recyclables. It is estimated that when fully implemented, these projects will divert over 1.41 million tons of recyclables from disposal and will create 735 new jobs. (See graph below for diversion rates from 1991-2001.) These active projects will receive a total of over \$12,900,000 in loan funding and leverage over \$142,000,000 in private investment.

**Projected Annual Tons of Materials Diverted
from Landfills as a Result of Projects**



This loan program has grown over the years. It started as a low-interest loan and was reduced to zero-percent interest in 1996 when the interest rates were low. The application and review process for receiving a loan is strict as required by the Recycling and Energy Development Board. The funds have assisted in the development of new companies using new recycling technologies and, especially more recently, has expanded efforts to assist more existing companies. The larger amounts of waste diversion in the later years is a function of these issues as well as advancements in recycling technologies that has led to more successful technologies able to take large amounts of materials and make them into products. Projects using large amounts of heavy material, such as coal-combustion by-products, show a significant increase in waste diversion. Smaller projects recycling lightweight materials, such as plastic, are still extremely important, providing new markets for scrap made across the state and removing large volumes of materials from landfill.

In 2000, the Recycling Market Development Program expanded the RPAF loan program to include the \$1 Million RPAF Attraction loan. This loan provides up to \$1 million in zero-percent interest loan financing to successful businesses expanding markets for hard to recycle priority materials. This expanded level of funding provides a real economic development tool that can attract successful businesses to expand in Indiana. Interest in this program has been very high. Recycling businesses and technologies have been developing around the world for the past ten to fifteen years. Indiana is in a

prime location to capitalize on the successes as companies expand. Indiana is centrally located to many cities and industries, has an expansive transportation system and strong existing industrial recycling infrastructure. These \$1 Million RPAF Attraction projects are lower risk and have a high recycling return by using a large amount of Indiana materials. Offering this additional loan financing moves Indiana into a more competitive position and will assist in moving recycling to a higher level.

Specific recyclables are targeted as priority materials by Commerce to focus efforts on finding markets for these materials. These include materials that currently do not have local markets, have a low market value, are high-volume materials, or are a new material in the waste stream. The recyclables targeted by the Commerce program are plastics, mixed glass, construction and demolition debris, coal combustion materials, tires, foundry sand, computers and electronics.

Grants to Encourage Waste Reduction and Buying Recycled

Additionally, in 2000, the Recycling Market Development Program expanded its program (with the approval of the Recycling and Energy Development Board) to include grants to encourage Indiana businesses, manufacturers and local government entities to find new ways to reduce waste and increase recycling and the use of recyclables. Companies in all sectors, from manufacturing to retail, can make a positive impact on reducing the amount of material going to landfills. There are currently 33 approved projects that will receive over \$435,000 in grant funding.

The *3R's Assessment and Innovations Grants* are aimed at assisting all Indiana businesses in having such an impact. The 3R's Grant provides matching funds (up to \$6,000) to companies to carry out "recycling" audits of facilities to determine more efficient operating procedures that will reduce waste and/or increase the use of recycled materials. The Innovations Grant takes this to the next level, with matching funds (up to \$100,000) for research and development on ways to implement a process that can reduce waste or utilize a recyclable material. The Commerce funded 3R's audits supplement IDEM's pollution prevention and compliance assistance programs offered to Indiana businesses.

Two additional grant programs were added to strengthen markets for recycled-content products in Indiana. The *Recycled Product Marketing Grant* provides funds (up to \$30,000) to recycled-content product manufacturers in the state for the development of a marketing campaign or the implementation of an existing campaign.

On the consumer end, the *Recycled Product Purchasing Grant* provides grants (up to \$5,000) to local Indiana government entities for the purchase of recycled-content products as a community trial or demonstration. Eligible products under the grant include plastic lumber-based products, recycled-content paper and promotional materials, among many other products.

Marketing Campaign



The Recycling Market Development Program's new program marketing campaign is reaching out to a broader audience. A logo has been developed, marketing brochures and mailers as well as print and web based advertisements. Commerce is challenging all Indiana businesses to reduce non-hazardous waste going to landfill through reuse, reduction, recycling and use recycled content products and feedstocks. By expanding its reach, Commerce can promote waste reduction and

recycling within all Indiana businesses. Companies in all sectors can have a significant impact on reducing waste and increasing markets for recyclables. The Recycling Market Development Program is 'reducing waste and rewarding innovation.'

New Web Site – Markets Information Available on Line

www.CommerceRecycles.in.gov

Commerce Recycling Market Development Program has updated the Web site to match the look of the marketing material and provide much more technical resources on the site. Details of all the financial programs can be downloaded. Technical resources are available that provide information on markets for recyclables, recycled-content products manufactured and distributed in Indiana, along with links to many other waste reduction resources. The database, Markets for Recyclables, provides user friendly, searchable access to over 200 companies seeking recyclables. The Recycled Product Showroom showcases recycled-content products manufactured or distributed in Indiana with company information so that users can locate the products. <http://www.CommerceRecycles.IN.gov/>

Over 200 Companies Provide Markets for Indiana Recyclables

The number of Indiana businesses using recycled-content material has expanded greatly in the past decade. Many more products are now made with recycled-content, and many companies prioritize manufacturing and purchasing recycled materials. Processors who prepare material for use as a feedstock have expanded. Products including paper, metals, plastics, and glass contain growing levels of recycled-content.

The Indiana Department of Commerce Recycling Market Development Program's technical assistance tools include a listing of markets -- brokers, processors and end users -- who take or purchase recyclables from Indiana sources. Recyclables might be generated by a business, manufacturer or through community residential collection programs. The listing has expanded from 122 companies in 1995 to over 230 companies in 2000. This data is available on the Indiana Department of Commerce's Recycling Web site (www.CommerceRecycles.in.gov).

These recycling activities are reflected in new jobs and economic activity in Indiana and around the world. Before state goals for waste diversion were established, material that was considered waste was destined to a final disposal facility, generating little economic activity. Now that same material has

become a value-added raw material and moves through collection, processing, remanufacturing and sales building jobs and adding to Indiana's economy. Indiana has gained from the benefits of recycling, and we are beginning to quantify this economic impact on the Indiana economy. Commerce has sponsored Indiana's participation in the national Recycling Economic Information Project. The Reuse and Recycling Industry in Indiana represents 1,700 establishments, employing approximately 75,000 people. These businesses have a payroll of approximately \$3 billion and \$19 billion in annual revenues (Indiana Recycling Economic Information Study, 2001).

Nationally, some recyclables are now priced as commodities, and thus are impacted by the global marketplace. Many materials are shipped across Indiana, across the United States and around the world. Indiana's industrial sector provides a strong base for use of recyclables, providing markets in Indiana for all household recyclables. Similar to other commodities, market prices for materials fluctuate because of changes in product demand, petroleum prices, and local, national and international economic situations. Periodically, certain materials have enjoyed a high market value but generally recycling end-users are built on stable low prices. Pricing can influence the amount of material diverted from landfill. It is important to continue to build demand for recyclables. Using recycled-content not only saves natural resources, but also saves energy and protects the atmosphere. For a summary of market prices for specific commodities see Attachment E.

Buy Recycled Initiatives: "Closing the Recycling Loop"



Over the past decade, Commerce has worked with state, regional and local entities to promote the buying of recycled-content products in order to "close the recycling loop." Our message to consumers has been clear: recycled-content products must be requested and purchased to support the product manufacturers. In turn this builds markets for recyclables being collected in Indiana.

While many products are marketed as recycled-content products, many others, such as steel, aluminum beverage cans, glass containers and corrugated boxes, have been manufactured with recycled content for years as standard practice, with little promotion. Therefore, most members of the public often do not know that they are already buying recycled-content products. The support for buying recycled-content products in Indiana continues to grow. We need to encourage manufacturers of recycled-content products to market their products as recycled so the public can make informed buying decision.

Commerce produces the annual "Buy Recycled Indiana! Guide to Recycled-Content Products." This document provides Indiana consumers with useful information on buying recycled and a listing of recycled-content manufacturers and distributors in the state. The newest edition of the guide was a collaborative effort between the Department of Commerce, the Department of Administration, the Department of Environmental Management and local recycling entities. The guide lists over 100 recycled-content product vendors, in addition to information on setting up a buy-recycled program. Hundreds of the guides have been distributed throughout Indiana and are updated annually.

To provide increased access to information on Indiana's recycled-content products, Commerce is adding an Indiana Recycled Products Showroom to our updated Web site. Users will be able to learn about recycled-content products manufactured and distributed in Indiana and link directly to listed company Web sites.

Over the past decade, state agencies have also partnered in presenting annual buy recycled conferences and trade shows, in accordance with IC 4-13.4-10-6. Commerce and the Department of Administration hosted annual conferences that brought together representatives from state and local government agencies with recycled-content procurement officials. Over the last two years, Commerce, in conjunction with IDOA, IDEM and other recycling organizations, has been working to promote and assist with local Buy Recycled Workshops throughout Indiana. These workshops bring local purchasers from the public and private sectors together with product vendors and teach them about the benefits and ease of buying recycled.

At the national level, America Recycles Day (ARD) has become an annual event held on November 15. Indiana state agencies and other organizations have been active in promoting ARD, which has been focused on buying recycled for the past four years. Over 150 ARD events are held annually in the state, further promoting the "buy recycled" message and helping to bolster markets for recyclables.

Energy Savings from Waste Reduction and Recycling

Waste reduction and recycling reduces our reliance on virgin raw materials, responsibly keeping materials in commerce. This saves energy by reducing our need to acquire raw resources such as timber, metal ore, petroleum, etc., many of these activities are very energy intensive. In addition, manufacturing processes that use recycled feedstocks often have much lower rates of energy consumption than those using only virgin materials. In addition, waste reduction and recycling can have direct benefits on reduction in air emissions that contribute to global climate change.

The Indiana Department of Administration State Government Recycling, Buying Recycled



and Greening the Government Programs

The Indiana Department of Administration initiated its recycled-content procurement policy in 1990, with the passage of HEA1240 (IC 4-13-1.4). In an effort to close the recycling loop, Indiana State Government continues to purchase new recycled content items, often at a cost savings to the state. Since 1990, the Indiana Department of Administration has maintained a recycled product business coordinator on staff, to help identify and locate suitable recycled-content products that State Government could purchase, in lieu of non-recycled items. This effort began small with office paper and various supplies. Over the last decade the effort has steadily grown so that at the end of the last fiscal year (FY99-00), over 10% of all commodities purchased contained recycled-content. This total amounted to over \$29 million.

Today, over 1,800 easily identified recycled-content products are listed in the State's office supply catalog. State buyers are restricted from purchasing non-recycled products, if a like recycled-content option is available. In addition, recycled content products are being used in construction applications, maintenance, transportation, custodial services and more.

Attachment F shows the State's total purchase of recycled-content products since tracking was begun in 1994. In the spring of 2001, the State's recycled-content procurement efforts received honorable award recognition by the United States Conference of Mayors' Recycling at Work Campaign.

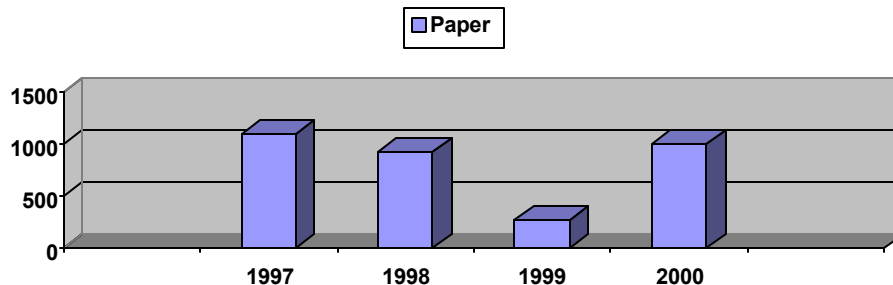
State government agencies and facilities have been working collectively since 1991 to reduce waste, reuse suitable materials, collect recyclables, and buy new recycled products. In 1999, Governor O'Bannon signed Executive Order 99-07 (E.O. 99-07), which furthered this effort by calling for the development of a comprehensive environmental plan that also focuses on conserving energy, preventing pollution and more. The Greening Plan was developed by representatives of the State's twelve largest agencies, unveiled by Governor O'Bannon in May of 2000, and is currently being implemented. Complete Greening details can be found at <http://www.IN.gov/greening>.

State operations have worked to reduce and reuse suitable materials. For example, in 1999 the State began a "duplex all copies" policy, which requires double-sided copies in an effort to save paper. State employees have access to electronic versions the State Employee Telephone Directory, so that printing numbers for these books have been reduced over the years. The State's employee publication "The

Interchange" has also moved to electronic copies, and substantially reduced printed copies. State Forms are available on the State's Web site, an effort that has resulted in forms being immediately accessible and also reduces the need for printing. Inter-departmental envelopes are reused, as are packaging peanuts and other suitable mailing supplies. The State's Surplus Operations also actively works to reuse state assets by making supplies and other items that are no longer needed by one agency available to other agencies that do need these items.

In 1991, the Indiana Government Center began an in-house recycling program. Today, a wide variety of materials are collected for recycling, including: mixed office papers, newspaper and magazines, corrugated cardboard, telephone books, hardback books, Indiana Code books, glass, plastic and metal beverage containers, batteries, fluorescent light bulbs, transparencies, toner cartridges, tyvek envelopes, cell phones, compact disks, video and audio cassettes, computer floppy disks, eyeglasses, greeting cards and other items as appropriate. In calendar year 2000, State employees working in Marion County diverted over 1,020 tons of material from the waste stream. This amount resulted in \$42,000 being earned from the sale of recyclable materials, and in addition, over \$47,000 was saved by not paying disposal fees. State facilities outside of the Indiana Government Center are also recycling, and the Greening Web site noted above lists almost 300 facility locations with some type of recycling program. The Greening Program is working to maximize these recycling collection efforts as much as possible.

Paper Diversion Amounts for state government collection program



The Greening the Government Plan doesn't stop at recycling, though. It also focuses on pollution prevention and energy conservation. For example, state facilities must develop a phase-out plan for mercury-containing items in their buildings, thus preventing possible future releases. Vehicle maintenance facilities' staffs have received training to substitute safer materials in their operations. Integrated pest management information is also being disseminated, both to state-owned and leased facilities, to reduce the use of broadly sprayed pesticides. Energy conservation also continues to be a focus, through new construction and renovation projects, and in the autumn of 2000, Indiana officially joined the U. S. Environmental Protection Agency's Energy Star Partnership. The Greening Program also promotes carpooling by employees to the Indiana Government Center. Several success stories are noted on the Greening Web site.

With these efforts, Indiana government has surged forward, greatly expanding the efforts to be an environmental steward, doing ourselves what the State has asked all Hoosiers to do, and setting an example of leadership for others.

Councils and Task Forces Created through Legislation

Solid Waste Policy Council (IC 13-21-2-1), 1991-99

A statute required council designed to give the Indiana Department of Environmental Management and the Indiana Department of Commerce direct guidance and advice on the development and implementation of state funded programs. The council was staffed through various Governor appointed volunteers, and met quarterly. West Lafayette Mayor Sonya Margerum chaired the council through its nine-year life, until a statute sunset of June 1999.

Indiana Recycled Paper Task Force (Formally IC 13-7-3-15), 1991-92

This statute-authorized task force was created by HEA 1240 (1990) to address the concerns and issues of paper recycling in the state. The task force was composed of representatives from the paper industry, newspaper publishers, IDEM, and environmental advocates and concerned citizens' groups. The Task Force developed voluntary guidelines for:

- a) Recycling newsprint and other paper products, and
- b) The availability and use of newsprint and other paper products that contain recycled fiber.

The final report, *Goals, Objectives and Strategies for Recycled Paper in Indiana* recommended four major state goals, four objectives to implement those goals, and five policy recommendations. A majority of these recommendations were implemented. The Hoosier State Press Association has presented progress reports to the state in 1994, 1996, 1998, and 2000 regarding the implementation of the policy guidelines in the newspaper industry.

Indiana Recyclable Materials Transportation Task Force, 1994-95

This task force was required through HEA 1412 (1993) to submit recommendations to enhance and improve the transportation of recyclables in the state. Governor Evan Bayh appointed various members of the recycling industry, state and local government, and citizen groups. The 80 page final report issued four recommendations for action:

- a. Development of a resource document identifying markets for recyclable materials, preparation requirements, available transportation modes and restrictions to transportation.
- b. Strongly encourages cooperative marketing of recyclables in rural Indiana.
- c. Study the collection and handling of recyclable materials from post-consumer generators to material recovery facilities.
- d. Encourage development of more efficient collection and processing technologies for recyclable materials.

Through two working subcommittees, all four recommendations were explored and implemented through regional efforts of local solid waste management districts.

Indiana Packaging Waste Reduction Task Force (Formally IC 13-7-3-16), 1991

Created by legislation (P.L. 1 – 1991) to develop voluntary guidelines for reducing the amount of packaging waste being disposed of in Indiana. A final report was published on January 1, 1992, encouraging state purchasing practices to reduce excessive shipment packaging through bulk

purchasing, and encouraging Indiana manufacturers and businesses to adopt packaging reduction policies and practices.

Indiana Institute on Recycling (IC 13-20-18-1)

In 1989, the General Assembly passed HEA 1123, creating the Indiana Institute on Recycling. The institute's statutory mission was to develop concepts, methods, and procedures for assisting in efforts to recycle solid waste (IC 13-20-18-3). The institute provided an annual report to the state legislature, and will sunset on June 30, 2001. Throughout the '90's, the institute provided leadership in public education, technical assistance, and the development of several studies. One of the main accomplishments of the Institute is the waste reduction case studies of one hundred businesses. For further information regarding the institute, see their web page at:

In addition to the above task forces created by legislation, there have been many non-legislative committees that have served usefully over the past decade. A brief summary of some of the other major task forces is noted in Attachment G.

Summary

To summarize, the state goal set in 1990 was aggressive and not reached, however Indiana has made great progress and has developed the government and businesses infrastructure to support and encourage expanded efforts. As noted, this "diversion rate" measures the total amount of source reduction, reuse, composting and recycling, which has resulted in diversion from landfill disposal, with a baseline year of 1993 through 1999. The State of Indiana is currently surveying recycling activity across the state in an effort to accurately measure a "recycling rate." This new measurement uses U.S. EPA measurement practices and will be comparable to other states using this system.

Waste diversion successes can be attributed to contributions made by the public and private sectors. Much work at the local level has been placed on infrastructure support for collection of recyclables from homeowners. Credit is due to the hundreds of cities and towns, counties, and solid waste management districts that have invested personnel and financial resources toward the establishment of 170 curbside recycling programs and over 650 recycling collection sites throughout the state. In addition, many of Indiana's industries and businesses have made great progress in reducing waste and increasing recycling. Many of these programs have been supported through the grant, loan and technical support programs available through the Indiana Departments of Environmental Management and Commerce.

As the private sector re-tooled for the higher collection volumes, markets for recyclables expanded across the state, national and world. As noted in the Indiana Recyclable Material Markets Directory, published by the Department of Commerce, there are now hundreds of Indiana businesses purchasing, processing and using recyclables. The Reuse and Recycling Industry in Indiana includes 1,700 establishments. Recycling is an industry within the state, with job creation and financial investment deeper than the surface may appear. Today markets are available within Indiana for the common types

of household recyclables and most types of industrial scrap. Indiana has a strong industry for recycling various types of metals, paper, glass, plastic and other materials. Recyclables are now commodities in the marketplace, challenging the industry with fluctuating market prices (note Attachment E).

State government itself created an internal recycling program to capture recyclables created in the state government's Indianapolis campus as well as at many other government facilities throughout the state. To close the recycling loop, the State also actively purchases a wide range of recycled-content products. These efforts continue to be refined and expanded as the comprehensive requirements of the Greening of the Government program are implemented.

Finally, it's the citizens of Indiana that make these efforts work, through their commitment to reducing waste, collecting recyclables at home and at work, using recycled materials as industrial feedstocks and purchasing recycled-content products both at home and at work. Statistics demonstrate that there are more recyclers in Indiana (2.4 million) than the number of voters in the last election (2.2 million).

Hoosiers care about the quality of life for their families and take pride in their businesses and communities progressive actions to preserve our natural resources through source reduction, reuse, recycling and use of recycled-content products.

The future brings new challenges, as these states programs strive to enhance opportunities and overcome barriers in order to move recycling in Indiana to a higher level. We are re-tooling our state assistance programs to address the current needs and will continue to improve upon the gains made in the last decade.